

Missouri Assessment Program

Spring 2006

Mathematics

Scoring Guides for Released Items

Grade 8

Session: 1

Item No.: 4

Strand: 02 Algebraic Relationships

Page No.: 3

Content Standard(s): 4 Patterns and Relationships

Process Standard(s): 1.6

Grade Level Expectation: A1B

Exemplary Response:

- | Figure | Perimeter |
|--------|-----------|
| 1 | 10 |
| 2 | 16 |
| 3 | 22 |
| 4 | 28 |
| 5 | 34 |
| 6 | 40 |

AND

- $6n + 4$

OR

Add 6 to the perimeter of the previous figure.

OR

Other valid rule

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Process Standard(s): 1.6
Grade Level Expectation: A1B

Strand: 02 Algebraic Relationships

Score Points:

2 points Exemplary response

1 point Completed table correctly
OR
Valid rule only

0 points Other

Session: 1
Item No.: 7
Page No.: 5
Content Standard(s): 4 Patterns and Relationships
Process Standard(s): 3.1
Grade Level Expectation: A3A

Strand: 02 Algebraic Relationships

Exemplary Response:

- (expression) $3,000 + (0.1d)$

OR

Other equivalent expression

AND

- (\$) 6,400

Score Points:

2 points Exemplary response

1 point Correct expression
OR
Correct answer

0 points Other

Session:**1**

Strand: 05 Data and Probability

Item No.:**12****Page No.:****8****Content Standard(s):** **3 Data Analysis, Probability, and Statistics****Process Standard(s):** **3.5****Grade Level Expectation:** **D4A****Exemplary Response:**

- 500 (heads) and 500 (tails)

AND

- Explanation equivalent to the following:

The probability of getting either heads or tails on a coin toss is $\frac{1}{2}$. The number of heads and the number of tails will always be half of the total number of flips because the theoretical probability for a coin toss is $\frac{1}{2}$.

OR

Other valid explanation

Score Points:

2 points Exemplary response

1 point Correct answers
OR
Correct explanation

0 points Other

Session:**1****Item No.:****17**

Strand: 03 Geometric and Spatial Relationships

Page No.:**11****Content Standard(s):****2 Geometric/Spatial Sense and Measurement****Process Standard(s): 3.1****Grade Level Expectation:** **G2A****Exemplary Response:**

- Two of the following: $(3, 1)$, $(-1, -2)$, $(1, 2)$, $(1, -3)$

OR

Other valid coordinates

AND

- 5 (units)

Score Points:

2 points Exemplary response

1 point Correct identifies two sets of coordinates
OR
Correct hypotenuse

0 points Other

Session:**1****Item No.:****22**

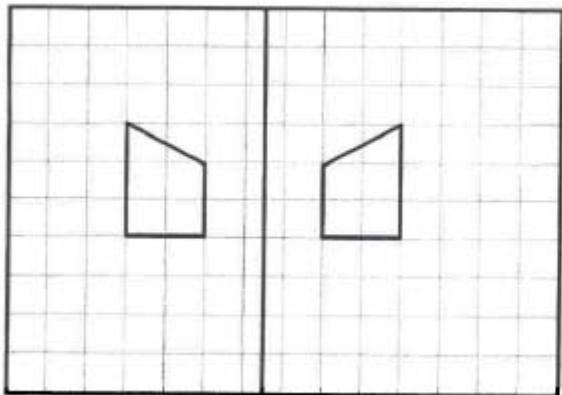
Strand: 03 Geometric and Spatial Relationships

Page No.:**15****Content Standard(s):****2 Geometric/Spatial Sense and Measurement****Process Standard(s): 1.6****Grade Level Expectation:** G3A**Exemplary Response:**

- translation or slide

AND

- Drawing equivalent to the following:

**Score Points:**

2 points Exemplary response

1 point Names transformation (slide) correctly
OR
Correct drawing of reflection

0 points Other

Session:**1****Item No.:****27**

Strand: 05 Data and Probability

Page No.:**19****Content Standard(s):****3 Data Analysis, Probability, and Statistics****Process Standard(s): 3.1****Grade Level Expectation:** D2A**Exemplary Response:**

- 60 (minutes)

AND

- Work equivalent to the following:

$$20 + 15 + 30 + 40 + 25 + 20 = 150$$

$$(150 + x) \div 7 = 30$$

$$150 + x = 210$$

$$x = 60$$

OR

Other valid process

Score Points:

2 points Exemplary response

1 point Correct answer

OR

Correct process; error in computation

0 points Other

Session:**1****Item No.:****30**

Strand: 04 Measurement

Page No.:**22-23****Content Standard(s):** **2 Geometric/Spatial Sense and Measurement****Process Standard(s):** **3.4, 4.1****Grade Level Expectation:** **M2C****Score Points:**

4 points The student's response fully addresses the performance event.

The response:

- demonstrates knowledge of volume and surface area.
- indicates the dimensions of three rectangular prisms that meet the specified requirements and calculates the surface area of each prism.
- shows understanding of how to minimize the surface area of a rectangular prism and applies the concept to a real life situation.
- may have only minor mathematical flaws with no effect on the reasonableness of the solution.

3 points The student's response substantially addresses the performance event.

The response:

- demonstrates knowledge of volume and surface area.
- indicates the dimensions of three rectangular prisms that meet the specified requirements and calculates the surface area for some of the prisms.
- shows understanding of how to minimize the surface area of a rectangular prism and applies the concept to a real life situation.
- may have only minor mathematical flaws with minimal effect on the reasonableness of the solution.

Session:**1****Item No.:****30**

Strand: 04 Measurement

Page No.:**22-23****Content Standard(s):** **2 Geometric/Spatial Sense and Measurement****Process Standard(s):** **3.4, 4.1****Grade Level Expectation:** **M2C****Score Points:**

2 points The student's response partially addresses the performance event.

The response:

- demonstrates a limited knowledge of volume and surface area.
- indicates the dimensions of three rectangular prisms that meet the specified requirements and incorrectly calculates or fails to calculate the surface area of some prisms.
- shows little or no understanding of how to minimize surface area and the application to a real life situation.
- may have flaws or extraneous information that indicates some lack of understanding or confusion.

1 point The student's response minimally addresses the performance event.

The response:

- demonstrates a limited knowledge of volume and surface area.
- indicates the dimensions of fewer than three rectangular prisms that meet the specified requirements and incorrectly calculates or fails to calculate the surface area of the prisms.
- shows no understanding of how to minimize surface area.
- may have flaws or extraneous information that indicates lack of understanding or confusion.

0 points Other—Responses not addressed by the Condition Codes:

Examples of “0”:

Work consists of copying the prompt information only.

Work indicates no mathematical understanding of the task.

Work consists of designs that do not meet the requirements.